

LS 4000P Series
Scanners



symbol®

LS 4000P Series Scanners

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Patents

This product is covered by one or more of the following U.S. and foreign Patents:

U.S. Patent No.4,360,798; 4,369,361; 4,387,297; 4,460,120; 4,496,831; 4,593,186; 4,603,262; 4,607,156; 4,652,750; 4,673,805; 4,736,095; 4,758,717; 4,816,660; 4,845,350; 4,896,026; 4,897,532; 4,923,281; 4,933,538; 4,992,717; 5,015,833; 5,017,765; 5,021,641; 5,029,183; 5,047,617; 5,103,461; 5,113,445; 5,130,520; 5,140,144; 5,142,550; 5,149,950; 5,157,687; 5,168,148; 5,168,149; 5,180,904; 5,229,591; 5,230,088; 5,235,167; 5,243,655; 5,247,162; 5,250,791; 5,250,792; 5,262,627; 5,262,628; 5,266,787; 5,278,398; 5,280,162; 5,280,163; 5,280,164; 5,280,498; 5,304,786; 5,304,788; 5,306,900; 5,321,246; 5,324,924; 5,337,361; 5,367,151; 5,373,148; 5,378,882; 5,396,053; 5,396,055; 5,399,846; 5,408,081; 5,410,139; 5,410,140; 5,412,198; 5,418,812; 5,420,411; 5,436,440; 5,444,231; 5,449,891; 5,449,893; 5,468,949; 5,471,042; 5,478,998; 5,479,000; 5,479,002; 5,479,441; 5,504,322; 5,519,577; 5,528,621; 5,532,469; 5,543,610; 5,545,889; 5,552,592; 5,578,810; 5,581,070; 5,589,679; 5,589,680; 5,608,202; 5,612,531; 5,619,028; 5,664,229; 5,668,803; 5,675,139; 5,693,929; 5,698,835; 5,705,800; 5,714,746; 5,723,851; 5,734,152; 5,734,153; 5,745,794; 5,754,587; 5,762,516; 5,763,863; 5,767,500; 5,789,728; 5,808,287; 5,811,785; 5,811,787; 5,815,811; 5,821,519; 5,821,520; 5,823,812; 5,828,050; 5,850,078; 5,861,615; 5,874,720; 5,875,415; 5,900,617; 5,902,989; 5,907,146; 5,912,450; 5,914,478; 5,917,173; 5,920,059; 5,923,025; D305,885; D341,584; D344,501; D359,483; D362,453; D363,700; D363,918; D370,478; D383,124; D391,250; D405,077; D406,581.

Invention No. 55,358; 62,539; 69,060; 69,187 (Taiwan); No. 1,601,796; 1,907,875; 1,955,269 (Japan).

European Patent 367,299; 414,281; 367,300; 367,298; UK 2,072,832; France 81/03938; Italy 1,138,713.

rev. 7/99

Introduction

The LS 4000P Series hand-held laser scanner offers the best performance for low volume, price sensitive PDF417 scanning in retail, office and light industrial applications. It uses a 650nm laser diode for improved scan-line visibility, and has a scan rate of approximately 200 scans/second. These factors make the LS 4000P Series scanner appropriate for PDF scanning while retaining all capabilities for 1-D scanning.

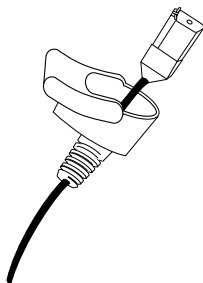
This Quick Reference Guide provides basic instruction on the following topics:

- *Setting Up the Scanner* on page 2
- *Scanning* on page 4
- *What Does The Beep Mean?* on page 7
- *What If...* on page 8

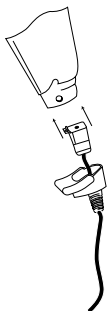
Setting Up the Scanner

Installing the Cable

1. Switch off all devices connected to the LS 4000P.
2. Pull the boot up over the cable until just the connector is protruding.



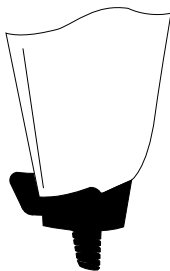
3. Plug the modular connector on the cable into the receptacle in the bottom of the LS 4000P handle. Listen for a click.



4. Gently tug the cable to ensure the connector is properly secured.

Q u i c k R e f e r e n c e

5. Slide the boot up while observing its orientation until it is securely in place.



6. Make certain the semi-circular key on the boot slides inside the handle assembly, and that the boot snaps into place.
7. Gently pull the boot to be sure it is properly seated.

Switching Cables

Different cables are required for different hosts. To change the scanner cable:

1. Slide the boot down over the cable.
2. Unplug the modular connector by depressing the connector clip (through the access hole), and remove the existing cable.
3. Follow the steps for *[Installing the Cable on page 2](#)*.

Scanning

Scanning 1-D Bar Codes

To scan a 1-D bar code:

1. Make sure all connections are secure, and the symbol you want to scan is within the scanning range.
2. Aim the scanner at the symbol and press the trigger. The scanning beam remains on for approximately 3.0 seconds (default) or until a successful decode.

The scanner has read the symbol when:

- You hear a short, high tone beep (if the beeper is enabled).
- The yellow LED on the rear of the scanner turns green.

The green LED stays lit for two seconds or until the next trigger pull.

Scanning PDF417 (2-D) Bar Codes

The PDF417 bar code type is enabled by default; to disable it, scan this bar code:



DISABLE PDF417

To enable PDF scanning, scan the bar code below. (These bar codes can also be found in the *LS 4000P Product Reference Guide*, p/n 70-37631-xx.



ENABLE PDF417

Q u i c k R e f e r e n c e

To scan a PDF417 bar code:

1. Aim the scanner at the PDF bar code and press the trigger.
2. Hold the trigger down and keep the scan line parallel to the **rows** of the symbol.
3. Manually raster the scan line by slowly moving the scanner up and down so it scans the entire bar code at a rate of one inch per second.

When PDF Decode Feedback is enabled, a clicking noise lets you know the bar code is being decoded. If this parameter is enabled but there's no clicking noise when you're scanning the bar code, it's not being scanned properly.

To improve PDF decoding:

- Check that PDF417 scanning is enabled.
- Make sure the scan line extends at least 1/2" past the left and right edges of the bar code.
- Hold the scanner closer for denser symbols, farther away for larger symbols.
- Make sure you scan the top and bottom rows of the symbol.
- Be patient - it may take a few swipes to decode the symbol.

The bar code has been completely decoded when you hear a tone, followed by a short, high tone beep. The yellow LED on the rear of the scanner turns green. The green LED stays lit for two seconds or until the next trigger pull.



Aiming

Scan the Entire Symbol

- Cross every bar and space of the symbol with the scan beam.
- Hold the scanner further away for larger bar codes.
- Hold the scanner closer for symbols with bars that are close together.

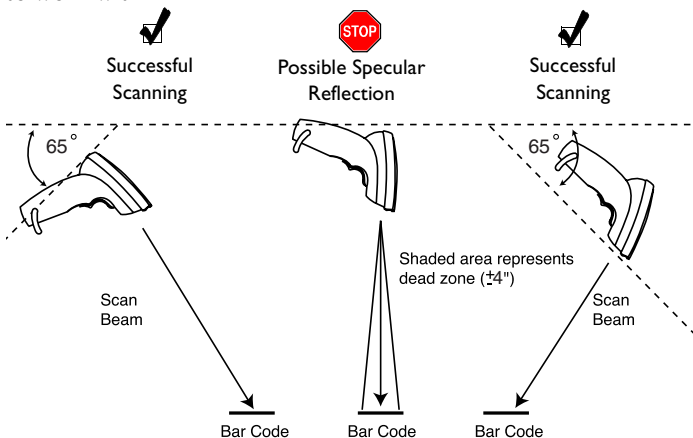


Hold at an Angle

Do not hold the scanner directly over the bar code. Laser light reflecting *directly* back into the scanner from the bar code is known as specular reflection. This strong light can “blind” the scanner and make decoding difficult. The area where specular reflection occurs is known as a “dead zone.”

Q u i c k R e f e r e n c e

You can tilt the scanner up to 65° forward or back and still achieve a successful decode. Simple practice quickly shows what tolerances to work within



What Does The Beep Mean?

When you hear a short, high tone beep, it means data has been decoded successfully. If any other beeps are heard, contact the technical person in charge of scanning.

What If...

Nothing happens when you follow the operating instructions?

You Should

- Check the system power. Is there a battery in the battery box?
- Be sure the scanner is programmed for the terminal in use.
- Make sure the scanner is programmed to read the type of bar code you are scanning.
- Check for loose cable connections.
- Check the symbol to make sure it is not defaced.
- Try scanning test symbols of the same code type.

Présentation

Le lecteur laser portable de la série LS 4000P offre des performances optimales pour un volume réduit en lecture PDF417. Efficace en termes de coût, il est destiné à des applications de distribution, de bureau et d'industrie légère. Doté d'une diode laser de 650 nm qui améliore la visibilité de ligne de lecture, il possède une cadence de balayage d'environ 200 balayages par seconde. Grâce à ces éléments, le lecteur de la série LS 4000P est adapté à la lecture PDF tout en conservant toutes les possibilités de lecture monodimensionnelle.

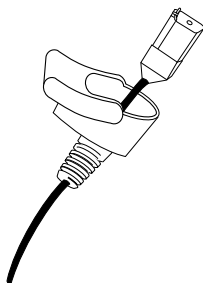
Ce Guide utilisateur fournit des instructions de base sur les sujets suivants :

- *Préparation du lecteur* en page 10
- *Lecture* en page 12
- *Signification du bip* en page 15
- *Dépannage* en page 16.

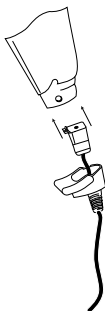
Préparation du lecteur

Installation du câble

1. Mettez hors tension tous les périphériques connectés au LS 4000P.
2. Faites coulisser l'embase le long du câble jusqu'à ce que le connecteur dépasse.

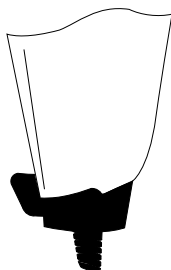


3. Enfoncez le connecteur modulaire du câble dans la prise située à la base de la poignée du LS 4000P jusqu'à ce qu'un déclic se produise.



4. Tirez délicatement le câble pour vous assurer que le connecteur est bien enfiché.

5. Faites coulisser l'embase vers le haut en l'alignant correctement.



6. Assurez-vous que la touche semi-circulaire de l'embase coulisse dans la poignée et s'enclenche correctement.
7. Tirez délicatement l'embase pour vous assurer qu'elle est bien en place.

Changement de câble

Les câbles changent en fonction de l'ordinateur central. Pour changer le câble du lecteur :

1. Faites coulisser l'embase vers le bas le long du câble.
2. Débranchez le connecteur modulaire en appuyant sur son clip (dans l'orifice d'accès), puis retirez le câble.
3. Suivez les étapes indiquées dans la section *Installation du câble* à la page 10.



Lecture

Lecture des codes à barres unidimensionnels

Procédure :

1. Vérifiez tous les branchements, puis placez le code à portée de lecture.
2. Pointez le lecteur sur le code, puis pressez la gâchette. Le faisceau de lecture reste activé environ 3 secondes (par défaut) ou jusqu'à ce qu'il parvienne à déchiffrer le code.

Le décodage est effectif quand :

- Vous entendez un bip aigu et bref (si le beeper est activé).
- Le témoin jaune à l'arrière du lecteur vire au vert.

Le témoin vert reste allumé pendant deux secondes ou jusqu'au prochain actionnement de la gâchette.

Lecture de codes à barres PDF417 (bidimensionnels)

Le code à barres de type PDF417 est activé par défaut ; pour le désactiver, lisez ce code à barres.



Désactivez PDF417

Pour activer la lecture PDF, lisez le code à barres ci-dessous. (On peut également trouver ces codes à barres dans *le Guide de référence produit LS 4000P*, référence 70-37631-xx.)



Activez PDF417

Pour lire un code à barres PDF417:

1. Pointez le lecteur sur le code à barres PDF, puis appuyez sur la gâchette.
2. Maintenez la gâchette enfoncée en tenant la ligne de lecture parallèle aux **lignes** qui composent le code.
3. Balayez lentement le code (2 cm par seconde) en opérant un mouvement vertical jusqu'à ce que le faisceau l'ait lu dans son intégralité.

Lorsque la confirmation de décodage PDF est activée, un déclic confirme le décodage. Si ce paramètre est activé, mais qu'aucun déclic ne retentit lorsque vous lisez le code, cela signifie qu'il n'a pas été décodé.

Pour améliorer le déchiffrement des codes PDF :

- Vérifiez que la lecture PDF417 est activée.
- Vérifiez que la ligne de lecture dépasse d'au moins 1 cm de chaque côté du code à barres.
- Rapprochez le lecteur pour les codes denses et éloignez-le pour les codes grand format.
- Vérifiez que vous avez bien lu les lignes supérieures et inférieures qui composent le code.
- Faites preuve de patience, il faut parfois plusieurs balayages pour déchiffrer le code.

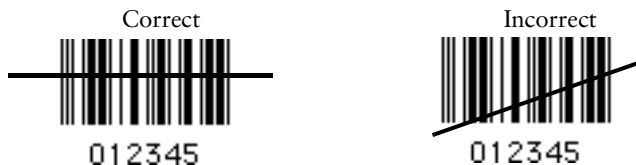
Le code à barres est intégralement décodé lorsque le lecteur émet une tonalité suivie d'un bip aigu. Le témoin jaune sur l'arrière du lecteur vire au vert. Le témoin vert reste allumé pendant deux secondes ou jusqu'à ce que la gâchette soit à nouveau actionnée.



Visée

Lisez le code dans son intégralité

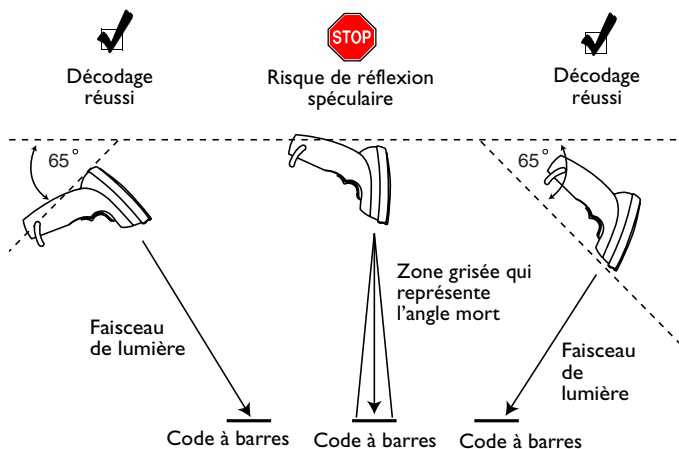
- Recouvrez toutes les lignes et tous les espaces composant le code avec le faisceau de lecture.
- Eloignez le lecteur pour les codes à barres grand format.
- Rapprochez le lecteur pour les codes plus denses.



Inclinez le lecteur

Ne tenez pas le lecteur directement au dessus du code à barres. Le faisceau laser renvoyé *directement* dans le lecteur provoque le phénomène appelé réflexion spéculaire. L'intensité du faisceau risque « d'aveugler » le lecteur et de rendre le décodage délicat. La réflexion spéculaire se produit dans « l'angle mort ».

Vous pouvez incliner le lecteur jusqu'à 65° vers l'avant ou l'arrière sans compromettre le décodage. Il suffit d'un peu de pratique pour se familiariser avec les angles de lecture.



Signification du bip

Lorsqu'un bip retentit (bref signal sonore aigu), cela signifie que les données ont été correctement décodées. Si vous entendez un « clic » lorsque vous lisez un code à barres PDF, cela signifie que les données ont été correctement décodées. Si le lecteur émet d'autres bips, contactez le technicien.

Dépannage

Si rien ne se produit lorsque vous suivez les instructions de mise en route

Procédez comme suit :

- Vérifiez l'alimentation du système. Une batterie est-elle insérée dans son logement ?
- Vérifiez que le lecteur est programmé pour le terminal utilisé.
- Vérifiez que le lecteur est programmé pour lire le type de code à barres en question.
- Vérifiez les branchements.
- Vérifiez que le code est en bon état.
- Essayez de lire d'autres codes du même type.

Einführung

Der Handlaserscanner der Serie LS 4000P bietet optimale Leistung bei kleinvolumigem, kostengünstigem PDF417-Scannen in Anwendungen für Einzelhandel, Büro und Kleinindustrie. Um eine verbesserte Sichtbarkeit der Scanzeilen zu ermöglichen, verwendet er eine 650nm Laserdiode, und hat eine Lesegeschwindigkeit von ungefähr 200 Scans pro Sekunde. Dadurch eignet sich der Scanner der Serie LS 4000P zum PDF-Scannen, während die Fähigkeiten zum 1-D-Scannen erhalten bleiben.

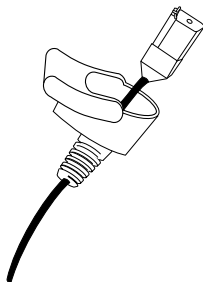
Diese Kurzübersicht gibt Anleitungen zu folgenden Themen:

- *Einrichten des Scanners* auf Seite 18
- *Scannen* auf Seite 20
- *Was bedeutet der Piepton?* auf Seite 23
- *Was wäre, wenn ...* auf Seite 24.

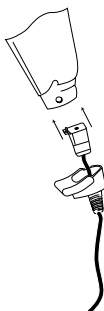
Einrichten des Scanners

Installieren des Kabels

1. Schalten Sie alle mit dem LS 4000P verbundenen Geräte ab.
2. Ziehen Sie die Steckerabdeckung nach oben über das Kabel, so daß nur noch der Stecker übersteht.



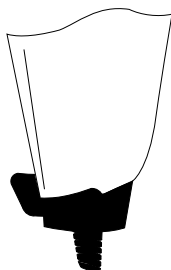
3. Stecken Sie den modularen Stecker am Kabel in die Buchse unten am Griff des Scanners bis er hörbar einrastet.



4. Ziehen Sie vorsichtig am Kabel, um sich zu vergewissern, daß der Stecker fest eingesteckt ist.

K u r z ü b e r s i c h t

5. Schieben Sie die Steckerabdeckung nach oben, und achten Sie dabei auf deren Ausrichtung, so daß sie fest eingesteckt ist.



6. Vergewissern Sie sich, daß der halbrunde Schlüssel auf der Steckerabdeckung in die Griffvorrichtung gleitet und daß die Steckerabdeckung einrastet.
7. Ziehen Sie vorsichtig an der Abdeckung, um sicherzustellen, daß sie fest eingesteckt ist.

Austauschen von Kabeln

Für verschiedene Host-Computer sind unterschiedliche Kabel erforderlich. So wechseln Sie das Scanner-Kabel aus:

1. Schieben Sie die Steckerabdeckung nach unten über das Kabel.
2. Lösen Sie den modularen Stecker, indem Sie die Anschlußklemme (über die Zugangsöffnung) herunterdrücken, und entfernen Sie das vorhandene Kabel.
3. Befolgen Sie die Anweisungen unter *Installieren des Kabels auf Seite 18*.



Scannen

Scannen von eindimensionalen Strichcodes

So scannen Sie einen eindimensionalen Strichcode:

1. Achten Sie darauf, daß alle Anschlüsse fest eingesteckt sind und daß das von Ihnen zu scannende Symbol sich in Reichweite des Scanners befindet.
2. Richten Sie den Scanner auf das Symbol, und betätigen Sie den Auslöser. Der Scanstrahl bleibt ca. 3 Sekunden eingeschaltet (Standard) oder bis zu einer erfolgreichen Decodierung.

Der Scanner hat das Symbol gelesen, wenn:

- Sie einen kurzen, hohen Piepton hören (falls der Piepton aktiviert ist).
- Die gelbe LED-Anzeige auf der Rückseite des Scanners grün wird.
- Die grüne LED-Anzeige zwei Sekunden lang aktiviert bleibt oder bis der Auslöser das nächste Mal betätigt wird.

PDF417 (2-D) Strichcodes scannen

Der Strichcode des Typs PDF417 ist standardmäßig aktiviert. Um ihn zu deaktivieren, scannen Sie diesen Strichcode:



PDF417 deaktivieren

Um PDF-Scannen zu aktivieren, scannen Sie den Strichcode unten. (Diese Strichcodes finden Sie auch im *LS4000P Produktleitfaden* p/n 70-37631-xx).



PDF417 aktivieren

K u r z ü b e r s i c h t

Um einen PDF417-Strichcode zu scannen:

1. Richten Sie den Scanner auf den PDF-Strichcode, und betätigen Sie den Auslöser.
2. Halten Sie den Auslöser gedrückt, und halten Sie die Abtastlinie parallel zu den **Zeilen** des Symbols.
3. Rastern Sie die Abtastlinie manuell, indem Sie den Scanner langsam nach oben und nach unten bewegen, so daß der gesamte Strichcode mit einer Geschwindigkeit von einem Zoll pro Sekunde gescannt wird.

Wenn die Feedbackfunktion für die PDF-Dekodierung aktiviert ist, signalisiert ein Klicken, daß gerade ein Strichcode decodiert wird. Wenn dieser Parameter aktiviert ist, jedoch beim Scannen des Strichcodes kein Klicken zu hören ist, wird er nicht richtig gelesen.

So verbessern Sie die PDF-Decodierung:

- Überprüfen Sie, ob der PDF417-Scanmodus aktiviert ist.
- Achten Sie darauf, daß die Abtastlinie mindestens 12 mm über das linke und das rechte Ende des Strichcodes hinausgeht.
- Halten Sie den Scanner bei kleineren, dichteren Symbolen näher an das Objekt, bei größeren Symbolen weiter weg vom Objekt.
- Achten Sie darauf, die obere und untere Reihe des Symbols zu scannen.
- Haben Sie Geduld - es sind möglicherweise mehrere Versuche notwendig, um das Symbol zu decodieren.

Der Strichcode wurde vollständig decodiert, wenn Sie einen Ton hören, gefolgt von einem kurzen, hohen Piepton. Die gelbe LED-Anzeige auf der Rückseite des Scanners wird grün. Die grüne LED-Anzeige leuchtet zwei Sekunden bzw. bis zum nächsten Betätigen des Auslösers.



Zielen

Gesamtes Symbol scannen

- Ziehen Sie den Scanstrahl über alle Striche und Zwischenräume des Symbols.
- Halten Sie den Scanner bei größeren Strichcodes weiter vom Objekt entfernt.
- Halten Sie den Scanner bei Symbolen mit dichtstehenden Strichen näher an das Objekt.

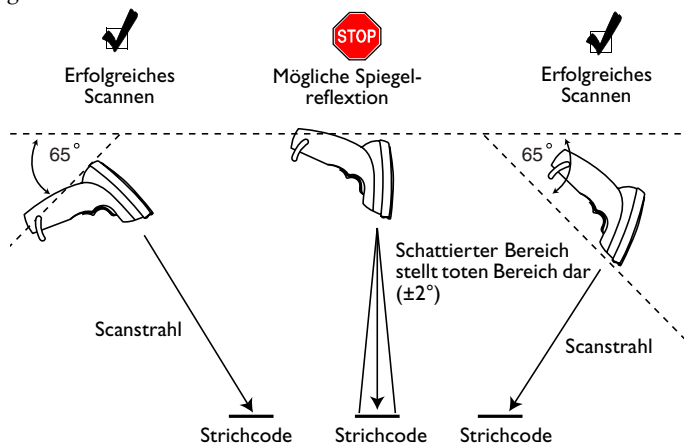


K u r z ü b e r s i c h t

Halten Sie den Scanner in einem Winkel zum Objekt

Halten Sie den Scanner nicht direkt über den Strichcode. Wenn Laserlicht *direkt* vom Strichcode zum Scanner zurückreflektiert wird, handelt es sich um eine Spiegelreflexion. Dieses starke Licht kann den Scanner „blenden“ und die Decodierung erschweren. Der Bereich, in dem die Spiegelreflexion auftritt, wird auch als „toter Bereich“ bezeichnet.

Sie können den Scanner bis zu 65 Grad nach vorne oder nach hinten neigen und immer noch eine erfolgreiche Decodierung erzielen. Durch Übung wird schnell deutlich, in welchen Toleranzen gearbeitet werden kann.



Was bedeutet der Piepton?

Wenn ein Piepton (kurzer hoher Ton) zu hören ist, bedeutet dies, daß Daten erfolgreich decodiert wurden. Wenn während des Scannens eines PDF-Strichcodes ein „Klicken“ zu hören ist, wurden die Daten ebenfalls erfolgreich decodiert. Wenn andere Pieptöne zu hören sind, wenden Sie sich an den für das Scannen zuständigen Techniker.

Was wäre, wenn ...

nichts geschieht, wenn Sie die Bedienungsanleitung befolgen?

Sie sollten

- die Stromzufuhr des Systems überprüfen. Befindet sich eine Batterie im Batteriefach?
- prüfen, ob der Scanner für das verwendete Terminal programmiert wurde.
- prüfen, ob der Scanner zum Lesen des von Ihnen gescannten Strichcodetyps programmiert ist.
- prüfen, ob sich Kabelanschlüsse gelöst haben.
- prüfen, ob das Symbol deformiert ist.
- versuchen, Testsymbole desselben Codetyps zu scannen.

Introduzione

I lettori portatili LS 4000P offrono prestazioni elevate per la lettura di codici PDF417 a basso volume e a costi contenuti in ambienti retail, uffici e applicazioni nel settore dell'industria leggera. I lettori LS 4000P utilizzano un diodo laser da 650nm che consente di aumentare la visibilità della linea di scansione e hanno una velocità di lettura di circa 200 scansioni al secondo. Grazie a queste caratteristiche i lettori LS 4000P offrono prestazioni elevate nella lettura dei codici PDF pur mantenendo le capacità di lettura dei codici 1D.

Questa Guida rapida contiene istruzioni sui seguenti argomenti:

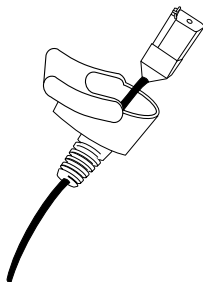
- *Impostazione dello scanner a pagina 26*
- *Scansione a pagina 28*
- *Cosa indica il segnale acustico? a pagina 31*
- *Come comportarsi se ... a pagina 32.*



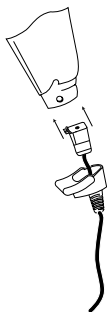
Impostazione dello scanner

Installazione del cavo

1. Spegnerne tutti i dispositivi collegati allo scanner LS 4000P.
2. Far scorrere il rinforzo lungo il cavo fino a far fuoriuscire solamente il connettore.

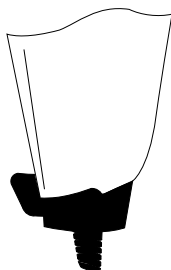


3. Inserire il connettore modulare del cavo nella presa situata nella parte inferiore del manico dello scanner LS 4000P, fino a quando non si avverte un clic.



4. Tirare delicatamente il cavo per verificare che il connettore sia fissato correttamente.

5. Far scorrere verso l'alto il rinforzo tenendone sotto controllo l'orientamento fino a fissarlo correttamente.



6. Assicurarsi che il tasto semicircolare del rinforzo venga inserito nel gruppo manico e che il rinforzo venga inserito fino allo scatto in posizione.
7. Tirare delicatamente il rinforzo in modo da assicurarsi che sia inserito correttamente.

Sostituzione di cavi

Ogni host richiede un cavo diverso. Per cambiare il cavo dello scanner:

1. Far scorrere il rinforzo lungo il cavo.
2. Disinserire il connettore modulare premendo il fermaglio del connettore (attraverso il foro di accesso) e rimuovere il cavo esistente.
3. Effettuare le operazioni indicate nella sezione *Installazione del cavo a pagina 26*.



Scansione

Scansione di codici a barre 1-D

Per decodificare un codice a barre 1-D:

1. Assicurarsi che tutti i connettori siano fissati correttamente e che il simbolo da decodificare rientri nel campo di scansione.
2. Mirare il simbolo con lo scanner e premere il grilletto. Il fascio di scansione rimane attivo per circa 3 secondi (impostazione predefinita) o fin quando la decodifica non ha esito positivo.

Vengono di seguito descritti i segnali che indicano l'avvenuta lettura del simbolo.

- Se il segnale acustico è attivato, viene emesso un breve tono alto.
- Il LED giallo sul retro dello scanner assume il colore verde.

Il LED verde rimane acceso per due secondi o fino alla successiva attivazione del grilletto.

Scansione dei codici a barre PDF417 (2-D)

Il codice PDF417 è attivato come valore predefinito, per disattivarlo leggere il codice a barre seguente.



Disattivazione del codice PDF417

Per attivare la lettura PDF, leggere il codice a barre seguente. (È possibile trovare questo e altri codici a barre nel manuale di riferimento per i lettori LS 4000P (*LS 4000P Product Reference Guide*, p/n 70-37631-xx).



Abilitazione del codice PDF417

Per leggere un codice PDF417:

1. Mirare il codice a barre PDF con lo scanner e premere il grilletto.
2. Tenere premuto il grilletto e mantenere la linea di scansione parallela alle **righe** del simbolo.
3. Per la copertura completa della linea di scansione spostare lentamente lo scanner verso l'alto e il basso, in modo da decodificare l'intero codice a barre ad una velocità di circa 2 cm al secondo.

Se PDF Decode Feedback (Segnale di decodifica PDF) è attivo, l'emissione di un clic consente all'utente di comprendere che la decodifica del codice è in atto. Durante la scansione di un codice a barre, la mancata emissione di questo segnale quando questo parametro è attivo indica che la scansione non viene effettuata correttamente.

Per migliorare la decodifica PDF:

- Assicurarsi che la scansione PDF417 sia attiva.
- Assicurarsi che la linea di scansione oltrepassi di almeno 10 mm il bordo destro e sinistro del codice a barre.
- Nel caso di simboli particolarmente densi, avvicinare lo scanner ai simboli, aumentando la distanza per quelli con una densità inferiore.
- Assicurarsi di leggere anche le righe nella parte superiore e inferiore del simbolo.
- Attenzione: la decodifica del simbolo potrebbe richiedere alcuni tentativi ripetuti di scansione.

L'emissione di un segnale acustico seguito da un breve tono alto indica che la decodifica del codice a barre è stata completata. Il LED giallo sul retro dello scanner diventa verde. Il LED verde rimane

acceso per due secondi o fino alla successiva attivazione del grilletto.



Mira

Scansione dell'intero simbolo

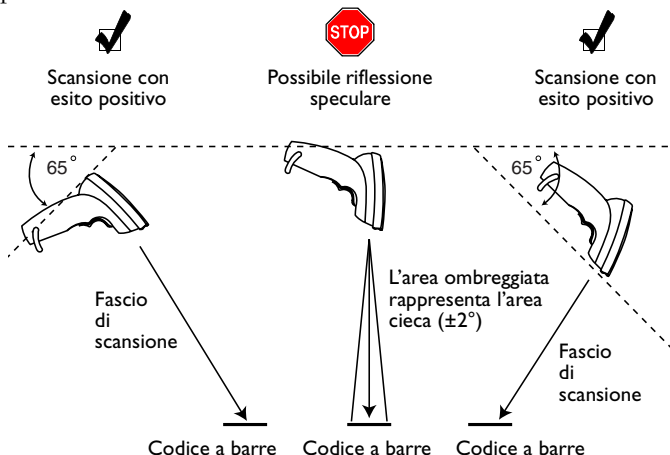
- Incrociare con il fascio di scansione tutti gli spazi e le barre del simbolo.
- Per i codici a barre di dimensioni maggiori, mantenere lo scanner ad una maggiore distanza.
- Per i simboli contenenti barre particolarmente ravvicinate tra loro, mantenere lo scanner a una minore distanza.



Tenere ad un angolo

Non puntare il lettore ad angolo retto sul codice a barre. La riflessione *diretta* della luce del laser dal codice a barre verso lo scanner, nota come riflessione speculare, può “schermare” lo scanner rendendo difficile la decodifica. L'area in cui si verifica una riflessione speculare viene indicata con il nome di “area cieca”.

È possibile inclinare lo scanner fino a 65° in avanti o indietro e continuare ad ottenere ottime decodifiche. Con un po' di pratica diventerà naturale posizionare il lettore entro i limiti di tolleranza previsti.



Cosa indica il segnale acustico?

L'emissione di un segnale acustico (breve tono alto) indica che la decodifica ha avuto esito positivo. L'emissione di una serie di “clic” durante la scansione di un codice a barre PDF indica che la decodifica dei dati avviene correttamente. Per qualsiasi altro segnale acustico emesso, rivolgersi al tecnico responsabile della scansione.

Come comportarsi se ...

Lo scanner non funziona nonostante siano state seguite le istruzioni d'uso?

È opportuno effettuare le operazioni descritte di seguito.

- Controllare l'alimentazione del sistema. Assicurarsi che la batteria sia stata inserita nell'apposito scomparto.
- Assicurarsi che lo scanner sia programmato per il terminale utilizzato.
- Assicurarsi che lo scanner sia programmato per leggere il tipo di codice a barre che si desidera decodificare.
- Assicurarsi che non vi siano connessioni difettose dei cavi.
- Assicurarsi che il simbolo non sia cancellato.
- Effettuare una scansione su simboli di prova dello stesso tipo di codice.

Introducción

El scanner láser de mano de la serie LS 4000P ofrece el mejor rendimiento para una lectura PDF417 económica y de bajo volumen en aplicaciones industriales, de ventas al por menor y de oficina. Utiliza un diodo láser de 650 nm para una mejor visibilidad de la línea de lectura y tiene una velocidad de lectura de aproximadamente 200 lecturas por segundo. Estos factores hacen del scanner de la serie LS 4000P el instrumento adecuado para la lectura PDF mientras retiene todas las capacidades para la lectura unidimensional.

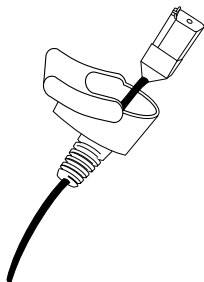
Esta Guía de referencia rápida proporciona instrucciones básicas sobre los siguientes tópicos:

- *Configuración del scanner* en la página 34
- *Lectura* en la página 36
- *¿Qué significa la señal sonora?* en la página 39
- *¿Qué pasa si...* en la página 40.

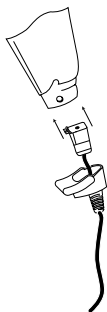
Configuración del scanner

Instalación del cable

1. Apague todos los dispositivos conectados al LS 4000P.
2. Tire de la goma situada encima del cable hasta que sólo sobresalga el conector.

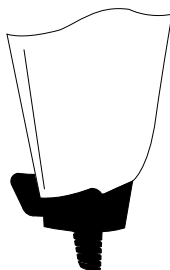


3. Enchufe el conector modular del cable al receptáculo que hay en el fondo del mango del LS 4000P. Presione hasta escuchar un clic.



4. Tire suavemente del cable para asegurarse de que el conector esté fijado correctamente.

5. Deslice la goma observando su orientación, hasta que esté fijada en su sitio.



6. Asegúrese de que la cerradura semicircular de la goma se deslice dentro del conjunto del mango y de que la goma encaje en su lugar.
7. Tire de la goma suavemente para asegurarse de que esté acoplada correctamente.

Cables de conexión

Se necesitan diferentes cables para los distintos ordenadores centrales. Para cambiar el cable del scanner:

1. Deslice la goma a lo largo del cable.
2. Desconecte el conector modular presionando el gancho del conector (a través del orificio de acceso) y quite el cable que haya.
3. Siga los pasos para la *Instalación del cable en la página 34*.



Lectura

Lectura de códigos de barras unidimensionales

Para leer un código de barras unidimensional:

1. Asegúrese de que todas las conexiones estén fijadas y de que el código que usted quiere leer esté dentro del rango de lectura.
2. Apunte el scanner hacia el código y apriete el gatillo. El haz de lectura se mantiene durante 3 segundos (por defecto), aproximadamente, o hasta que se logre una decodificación satisfactoria.

El scanner ha leído el símbolo cuando:

- Se oye una señal sonora corta y de tono alto (si el aparato de emisión de señales sonoras está conectado).
- El LED amarillo de la parte posterior del scanner se enciende en verde.

El LED verde permanece encendido durante dos segundos o hasta que se apriete otra vez el gatillo.

Lectura de códigos de barras PDF417 (bidimensional)

El tipo de código de barras PDF417 se encuentra activado por defecto. Para desactivarlo, lea este código de barras:



Desactivar PDF417

Para activar la lectura PDF, lea el código de barras que se encuentra a continuación. (Estos códigos de barras también pueden

encontrarse en la *Guía de referencia del producto LS 4000P*, n/r 70-37631-xx).



Activar PDF417

Para leer un código de barras PDF417:

1. Apunte el scanner hacia el código de barras PDF y apriete el gatillo.
2. Continúe con el gatillo apretado y mantenga la línea de lectura paralela a las **filas** del código.
3. Recorra manualmente la línea de lectura moviendo lentamente el scanner hacia arriba y hacia abajo, de forma que lea todo el código de barras a una velocidad de unos 3 cm por segundo.

Cuando esté activada la Retroalimentación de decodificación PDF, un sonido corto y repetido le permite saber que se está decodificando el código de barras. Si este parámetro está activado pero no hay ningún sonido corto y repetido cuando está leyendo el código de barras, esto significa que no se está leyendo correctamente.

Para mejorar la decodificación PDF:

- Compruebe que la lectura PDF417 esté activada.
- Asegúrese de que la línea de lectura se extiende como mínimo 2 centímetros más allá de los bordes izquierdo y derecho del código de barras.
- Mantenga el scanner cerca para los códigos más densos y más alejado para los códigos más grandes.
- Asegúrese de leer las filas superior e inferior del código.
- Tenga paciencia, pueden ser necesarias varias pasadas para decodificar el código.

El código de barras ha sido decodificado completamente cuando oye un tono, seguido de una señal sonora corta y de tono alto. El LED amarillo de la parte posterior del scanner se enciende en verde. El LED verde permanece encendido durante dos segundos o hasta que se apriete otra vez el gatillo.



Apuntado

Leer el símbolo entero

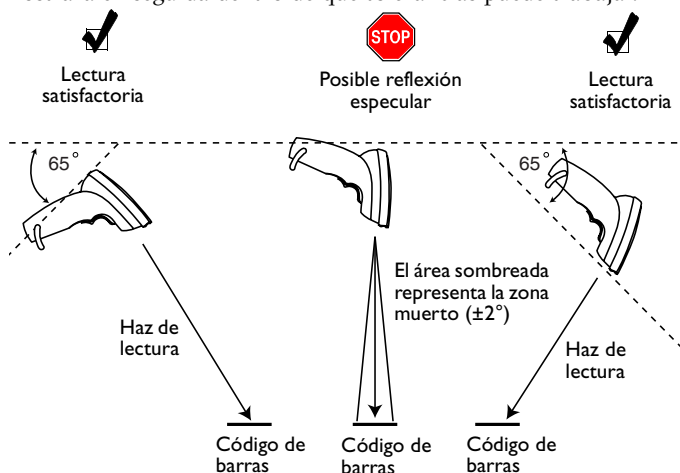
- Cruce todas las barras y espacios del código con el haz de lectura.
- Mantenga el scanner más alejado para códigos de barras más grandes.
- Mantenga el scanner más cerca para códigos de barras que estén muy juntas.



Sujetar desde un ángulo

No mantenga el scanner *directamente* sobre el código de barras. El fenómeno que se produce cuando la luz del láser se refleja de nuevo directamente en el scanner desde el código de barras se conoce como reflexión especular. Esta luz tan fuerte puede “cegar” al scanner y dificultar la decodificación. El área donde se produce la reflexión se conoce como “zona muerta”.

Puede inclinar el scanner hasta 65° hacia delante o hacia atrás y aún así conseguir una decodificación satisfactoria. La simple práctica le mostrará en seguida dentro de qué tolerancias puede trabajar.



¿Qué significa la señal sonora?

Cuando oiga una señal sonora (tono alto y corto) significa que los datos se han decodificado de forma satisfactoria. Si oye sonidos cortos y repetidos durante la lectura de un código de barras PDF, significa que los datos se están decodificando de forma satisfactoria. Si se oye cualquier otra señal sonora póngase en contacto con el técnico encargado de la lectura.

¿Qué pasa si...

...no ocurre nada a pesar de seguir las instrucciones de funcionamiento?

Entonces deberá

- Comprobar la potencia del sistema. ¿Hay una batería en el compartimento de baterías?
- Comprobar que el scanner esté programado para el terminal en uso.
- Comprobar que el scanner esté programado para leer el tipo de código de barras que usted está leyendo.
- Comprobar si está floja alguna conexión de cables.
- Comprobar el código para asegurarse de que no esté desfigurado.
- Intentar leer los códigos de prueba del mismo tipo de código.

Regulatory Information

Radio Frequency Interference Requirements

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC Part 15. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radio Frequency Interference Requirements - Canada

This device complies with RSS 210 of Industry & Science Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Industry Canada Standard ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 d'Industrie Canada.

CE Marking and European Union Compliance



Products intended for sale within the European Union are marked with the CE Mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included:

Applicable Directives

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

Applicable Standards

- EN 55022:1998, Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
- EN 55024:1998; Information Technology equipment - Immunity characteristics - Limits and methods of measurement
- IEC 1000-4-2:1995; Electromagnetic compatibility (EMC);Part 4:Testing and measurement techniques;Section 4.2:Electrostatic discharge immunity test
- IEC 1000-4-3:1997; Electromagnetic Compatibility (EMC);Part 4:Testing and measurement techniques; Section 3. Radiated, radio frequency, electromagnetic field immunity test.
- IEC 1000-4-4:1995; Electromagnetic compatibility (EMC); Part 4: Testing and measurement techniques;Section 4:Testing electrical fast transient,/Burst immunity.
- IEC1000-4-5:1995; Electromagnetic compatibility (EMC), Part 4: Testing and measurement techniques;Section 5: Surge Immunity
- IEC 1000-4-6:1996; Electromagnetic compatibility (EMC), Part 4:Testing and measurement techniques; Section 6: Immunity to conducted disturbances, induced by radio frequency fields.
- IEC 1000-4-11:1994; Electromagnetic compatibility (EMC), Part 4: Testing and measurement techniques; Section 11: Voltage Dips, Short Interruptions, and Voltage Variations.
- EN 60 950 + A1+A2+A3+A4+A11 - Safety of Information Technology Equipment Including Electrical Business Equipment
- EN 60 825-1 (EN 60 825) - Safety of Devices Containing Lasers

Laser Devices

Symbol products using lasers comply with US 21CFR1040.10, and IEC825-1:1993, EN60825-1:1994+A11:1996. The laser classification is marked on one of the labels on the product.

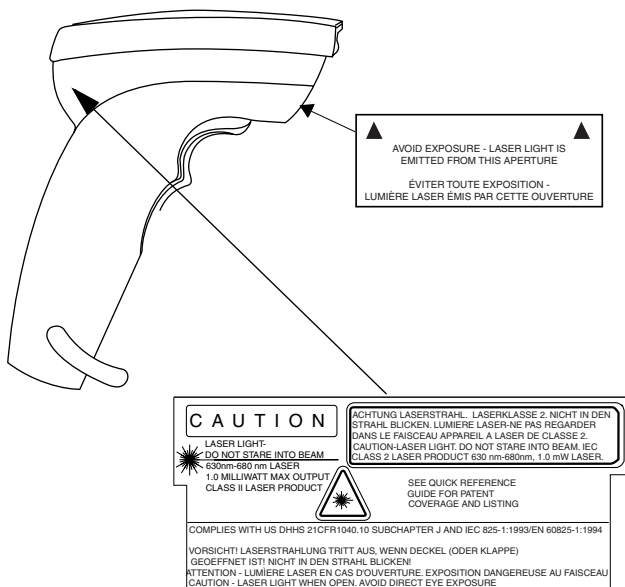
Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

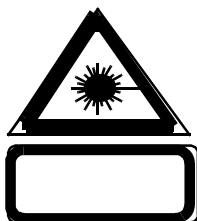
Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

Q u i c k R e f e r e n c e

Scanner Labeling



In accordance with Clause 5, IEC 0825 and EN60825, the following information is provided to the user:



ENGLISH
 CLASS 1
 CLASS 2

CLASS 1 LASER PRODUCT
 LASER LIGHT
 DO NOT STARE INTO BEAM
 CLASS 2 LASER PRODUCT

HEBREW

מוצר לייזר רמה 1
 אור לייזר
 אין להביט אל תוך הזרם
 מוצר לייזר רמה 2

רמה 1
 רמה 2

LS 4000P Series Scanners

DANISH KLASSE 1 KLASSE 2	KLASSE 1 LASERPRODUKT LASERLYF SE IKKE IND I STRÅLEN KLASSE 2 LASERPRODUKT AL LASER DI CLASSE 2	ITALIAN CLASSE 1 CLASSE 2	PRODOTTO AL LASER DI CLASSE 1 LUCE LASER NON FISSARE IL RAGGIOPRODOTTO
DUTCH KLASSE 1 KLASSE 2	KLASSE-1 LASERPRODUKT LASERLICHT NIET IN STRAAL STAREN KLASSE-2 LASERPRODUKT	NORWEGIAN KLASSE 1 KLASSE 2	LASERPRODUKT, KLASSE 1 LASERLYS IKKE STIRR INN I LYSSTRÅLEN LASERPRODUKT, KLASSE 2
FINNISH LUOKKA 1 LUOKKA 2	LUOKKA 1 LASERTUOTE LASERVALO ÄLÄ TUJOTA SÄDETTÄ LUOKKA 2 LASERTUOTE	PORTUGUESE CLASSE 1	PRODUTO LASER DA CLASSE 1
FRENCH CLASSE 1 CLASSE 2	PRODUIT LASER DE CLASSE 1 LUMIERE LASER NE PAS REGARDER LE RAYON FIXEMENT PRODUIT LASER DE CLASSE 2	CLASSE 2	LUZ DE LASER NÃO FIXAR O RAIOS LUMINOSO PRODUTO LASER DA CLASSE 2
GERMAN KLASSE 1 KLASSE 2	LASERPRODUKT DER KLASSE 1 LASERSTRAHLEN NICHT DIREKT IN DEN LASERSTRAHL SCHAUEN LASERPRODUKT DER KLASSE 2	SPANISH CLASE 1 CLASE 2	PRODUCTO LASER DE LA CLASE 1 LUZ LASER NO MIRE FJAJAMENTE EL HAZ PRODUCTO LASER DE LA CLASE 2
		SWEDISH KLASS 1 KLASS 2	LASERPRODUKT KLASS 1 LASERLJUS STIRRA INTE MOT STRÅLEN LASERPRODUKT KLASS 2

Ergonomic Recommendations

Caution: In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are meeting with your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

Q u i c k R e f e r e n c e

Service Information

Before you use the unit, it must be configured to operate in your facility's network and run your applications.

If you have a problem running your unit or using your equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Symbol Support Center:

United States	1-800-653-5350	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	337-6588
Australia	1-800-672-906	Austria	1-505-5794
Denmark	7020-1718	Finland	9 5407 580
France	01-40-96-52-21	Germany	6074-49020
Italy	2-484441	Mexico	5-520-1835
Netherlands	315-271700	Norway	66810600
South Africa	11-4405668	Spain	9-1-320-39-09
Sweden	84452900		
Latin America Sales Support		1-800-347-0178 Inside US	
		+1-561-483-1275 Outside US	
Europe/Mid-East Distributor Operations		Contact local distributor or call	
		+44 118 945 7360	

Warranty

Symbol Technologies, Inc. ("Symbol") manufactures its hardware products in accordance with industry-standard practices. Symbol warrants that for a period of twelve (12) months from date of shipment, products will be free from defects in materials and workmanship.

This warranty is provided to the original owner only and is not transferable to any third party. It shall not apply to any product (i) which has been repaired or altered unless done or approved by Symbol, (ii) which has not been maintained in accordance with any operating or handling instructions supplied by Symbol, (iii) which has been subjected to unusual physical or electrical stress, misuse, abuse, power shortage, negligence or accident or (iv) which has been used other than in accordance with the product operating and handling instructions. Preventive maintenance is the responsibility of customer and is not covered under this warranty.

Wear items and accessories having a Symbol serial number, will carry a 90-day limited warranty. Non-serialized items will carry a 30-day limited warranty.

Warranty Coverage and Procedure

During the warranty period, Symbol will repair or replace defective products returned to Symbol's manufacturing plant in the US. For warranty service in North America, call the Symbol Support Center at 1-800-653-5350. International customers should contact the local Symbol office or support center. If warranty service is required, Symbol will issue a Return Material Authorization Number. Products must be shipped in the original or comparable packaging, shipping and insurance charges prepaid. Symbol will ship the repaired or replacement product freight and insurance prepaid in North America. Shipments from the US or other locations will be made F.O.B. Symbol's manufacturing plant.

Symbol will use new or refurbished parts at its discretion and will own all parts removed from repaired products. Customer will pay for the replacement product in case it does not return the replaced product to Symbol within 3 days of receipt of the replacement product. The process for return and customer's charges will be in accordance with Symbol's Exchange Policy in effect at the time of the exchange.

Customer accepts full responsibility for its software and data including the appropriate backup thereof.

Repair or replacement of a product during warranty will not extend the original warranty term.

Symbol's Customer Service organization offers an array of service plans, such as on-site, depot, or phone support, that can be implemented to meet customer's special operational requirements and are available at a substantial discount during warranty period.

General

Except for the warranties stated above, Symbol disclaims all warranties, express or implied, on products furnished hereunder, including without limitation implied warranties of merchantability and fitness for a particular purpose. The stated express warranties are in lieu of all obligations or liabilities on part of Symbol for damages, including without limitation, special, indirect, or consequential damages arising out of or in connection with the use or performance of the product.

Seller's liability for damages to buyer or others resulting from the use of any product, shall in no way exceed the purchase price of said product, except in instances of injury to persons or property.

Some states (or jurisdictions) do not allow the exclusion or limitation of incidental or consequential damages, so the proceeding exclusion or limitation may not apply to you.



70-37632-01

Revision A — September 1999